

WHAT IS CLAIMED IS:

1. A surface-mountable PTC thermistor element comprising:  
a thermistor element body including a top surface and a bottom surface;  
electrodes disposed on the top surface and the bottom surface of the thermistor element body;  
lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward;  
wherein a vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body.

2. A surface-mountable PTC thermistor element according to Claim 1, wherein said vertical-leg portion of the lower terminal is located in the vicinity of the center of the thermistor element body.

3. A surface-mountable PTC thermistor element according to Claim 1, wherein a junction portion of the upper terminal and one of the electrodes are arranged to overlap each other at a central portion of the thermistor

element body.

4. A surface-mountable PTC thermistor element according to Claim 1, wherein the thermistor element body has a substantially round button shape.

5. A surface-mountable PTC thermistor element according to Claim 1, wherein each of the electrodes includes a nickel layer and a silver layer.

6. A surface-mountable PTC thermistor according to Claim 1, wherein each of the terminals has a flat-plate shaped configuration and is made of stainless steel.

7. A surface-mountable PTC thermistor according to Claim 1, wherein a lower end of the vertical-leg portion is bent to define a horizontal connection portion.

8. A surface-mountable PTC thermistor according to Claim 1, wherein the lower terminal has a junction portion connected with one of the electrodes at a location only near the central portion of the thermistor element body.

9. A surface-mountable PTC thermistor according to Claim 1, wherein the upper terminal includes a vertical-leg

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10. A surface-mountable PTC thermistor according to Claim 9, wherein a lower end of the vertical-leg portion of the upper terminal is bent to define a horizontal connection portion.

11. A method of mounting a surface-mountable PTC thermistor element, the method comprising the steps of:

holding the PTC thermistor element via an element-holder; and

surface-mounting the thermistor element onto a mounting target, the thermistor element being a surface-mountable PTC thermistor element having a thermistor element body and electrodes formed on a top surface and a bottom surface of the thermistor element body, and upper and lower terminals arranged such that each of the electrodes is connected with a respective one of the upper and lower terminals, the upper and lower terminals being arranged to extend downward;

wherein a vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body, and an area of the thermistor element body that is held by said element holder and at least a part of said vertical-leg

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portion overlap each other in a vertical direction, and the thermistor element body is held by said element holder to be surface-mounted onto the mounting target.

12. The method according to Claim 11, wherein said vertical-leg portion of the lower terminal is located in the vicinity of the center of the thermistor element body.

13. The method according to Claim 11, wherein a junction portion of the upper terminal and one of the electrodes are arranged to overlap each other at a central portion of the thermistor element body.

14. The method according to Claim 11, wherein the thermistor element body has a substantially round button shape.

15. The method according to Claim 11, wherein each of the electrodes includes a nickel layer and a silver layer.

16. The method according to Claim 11, wherein each of the terminals has a flat-plate shaped configuration and is made of stainless steel.

17. The method according to Claim 11, wherein a lower

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end of the vertical-leg portion is bent to define a horizontal connection portion.

18. The method according to Claim 11, wherein the lower terminal has a junction portion connected with one of the electrodes at a location only near the central portion of the thermistor element body.

19. The method according to Claim 11, wherein the upper terminal includes a vertical-leg portion that is longer than the vertical-leg portion of the lower terminal.

20. The method according to Claim 19, wherein a lower end of the vertical-leg portion of the upper terminal is bent to define a horizontal connection portion.

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